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We have a lot of new material to cover in this issue. TRUMP CARD by Miracle Systems is here and is excellent. We had a few "teething" problems with disk drives but everything now is working fine. On Mitsubishi drives, the drive light will stay on when using TRUMP. It is a minor inconvenience and we are working on it. With 900k QL's now available through the use of the TRUMP CARD, you can format a ramdisk for 1440 sectors (the size of a single, double-sided double density disk drive) and still have over 125k free in the machine! Plus, with TOOLKIT II in Eprom, and a print spooler as well as a ramdisk and memory cut, this is an exceptionally well-priced peripheral when you consider it is under \$300.00 in price.

The dynamic printer buffer on TRUMP has two names: the "usage" and the "device." The default usage name is PRT and the default device is SER. The printer buffer works by intercepting any OPEN call to a device whose name starts with its usage name. It substitutes the device name for the usage, and tries to open the device. If it succeeds, then all the output is buffered within the QL's main memory. If the device is in use, then the output is also buffered until the device is available. There is no limit to the number of buffered output files open at one time. If an error occurs during output, the buffer contents are thrown away.

The screen dump facilities are available in three ways. Screen dumps may be invoked at any time with a user definable hotkey. They may be invoked using a SuperBasic command or screen dumps may be made through the IO system from programs written in any language.

The Ram disk is either static or dynamic. A dynamic ram disk is created by accessing it with any normal operation (i.e. DIR). This type of ram disk takes memory as required, and releases any memory as files are deleted or truncated. A fixed ram disk is created by formatting it: the size, in sectors, is given in place of the usual name. You can also do microdrive imaging which is a very fast method of loading files from a microdrive cartridge. To produce a microdrive image, a ram disk is formatted with the name of the microdrive required: FORMAT ram1_mdv2, which will load an image of mdv2_ into ram1_. The ram disk can even load a microdrive with a damaged directory. It cannot, however, load a microdrive with a damaged map.

Miracle Systems has also announced that they are working on a MIDI INTERFACE for the QL. The interface will have MIDI-in, MIDI-out, and MIDI-through ports available. Pricing should be under \$100.00 and we expect to have product by sometime late next month. We should have more information in the next few weeks.

We have also received the new CP/MULATOR for the QL and want to describe some of its features for you now. The package consists of a ROM cartridge and a disk, either 5 1/4" or 3 1/2". Each disk contains its own serial number encoded throughout each sector. Any disk may be freely copied but dealers and the manufacturer are tracking serial numbers so it will be easy to tell where any pirated copies would be coming from. We like this method of "protection" because it allows you to make copies for your own private use without the need of having a "key" cartridge which is a nuisance.

The manual that comes with the program is in two parts. The first is a 16 page Users Manual for the CP/MULATOR. The second section is a six page RDCPM USERS MANUAL. RDCPM is a program to allow reading of CP/M disks in many different formats by the QL. The program is supplied in the single file "RDCPM_EXE" on the distribution disk included with the package. To run it you need at least one disk drive(DSDD) with 80 tracks per side. If the program is run on a single disk drive system, a further directory device such as a microdrive or RAMdisk will be needed if you want to save some of the formats you are creating for future use. The program occupies less than 60k of memory.

On startup the program asks which disk drive you want to use for the CP/M disk. The selected drive remains the same throughout the session and cannot be used for anything else. We have found that unfortunately a Cumana disk I/F cannot read a single sided disk. When it is trying to analyze the CP/M disk it will show a track count of 0 which is of course incorrect. It also will analyze the disks as being only 8 sectors instead of 10. If you own a Cumana disk I/F it may sometimes be able to analyze the single-sided disks, but not always. Make sure, in that case, you try and get double-sided CP/M disks and then you shouldn't have any problems at all.

So far we have had limited success in analyzing Kaypro, Zenith, and TRS80 disks, all of which are double density single sided. Only four formats are included-- Atari ST CP/M, GEMQDDS, JKCPM+, and Superbrain DD35. If your disks are not compatible with any of these, you may design your own format. You do this by entering the necessary information for sector skews, inverted data, number of reserved tracks, block size, and number of directory blocks. Once this is done correctly, you should be able to get a directory off of the CP/M disk.

Included in the RDCPM program are options to allow you to copy the CP/M file(s) to a QDOS disk. When this is done, the files appear saved with a "@" symbol before the file, for example, "@myfile_text".

Once you have created your QDOS CP/M files you can then boot up the CPMU_EXE file and run your programs. While in CP/M the file would appear as "myfile.text".

The program is not really finicky but it will be somewhat frustrating to use until we get a list of pre-defined formats for different disks, a "QDOS-CP/M" library and a list of what disks I/F's

work with what, etc. etc.

Digital Precision has announced the release of DESKTOP PUBLISHER for the QL. The program requires at least 256k memory expansion and incorporates twelve graphic(headline) fonts and eight QL text fonts as standard. There are 150 graphic symbols and 160 paintbrush styles. You can use any of the graphic symbols as a paintbrush in addition to the standard shapes. DP will load any ASCII file, plus QUILL files with non-ASCII characters.

Text can be justified pixel by pixel, ranged left or right, or centered, made bold,italisicized to the left or right or inverted. Four different styles of underlining are included. The program is completely compatible with QUILL and performs the full range of editing functions on QUILL texts.

DP also includes clip art for pinching and can import graphics from various sources (including EASEL or BUSINESS GRAPHICS). If you have one, you can also pull graphics in from a video digitiser. Two paper formats and four different printer routines are supported. The printer driver is directed towards Epson compatibles but is reconfigurable for most other suitable printers (although not daisywheel).

Gap Software is releasing a new, updated version of FRONT PAGE called FRONT PAGE EXTRA. We hope to have reviews in upcoming issues of QLR on the similarities and differences between these two programs. Obviously, the old adage, "You get what you pay for..." will be in effect. EXTRA retails for \$49.95 while DESKTOP will be priced at \$119.95.

Also new while we are on the subject of word processing is a superb spelling checker called SPELLBOUND. The advantage of this one over others is that you can put it in a mode whereby it will, from within QUILL or THE EDITOR, alert you immediately if you misspell a word. No more creating special documents that need to be run through the spelling checker at a later date. This program is as close to a spelling corrector as you can get. The dictionary contains 30,000 words and you can customize a dictionary of your own for your own special use. There are five different modes ranging from one which beeps to let you know you have a word the dictionary does not mention to a mode whereby you literally cannot do anything until you correct your error. If you are in a mode where you want to continue typing, SPELLBOUND will beep, put a "^" mark next to the would be error and let you continue typing. It can keep up even with typists who average 100 words per minute. Price: \$51.95 .

LOCAL VARIABLES

----- by Marshall Stiles

"What are local variables, anyway?" This was one of the questions I asked myself when I first read my QL USER GUIDE. Of course, I didn't know what a PROCEDURE was either. Soon I discovered that I had been using global variables all along and didn't even know it. Local variables are used within a procedure or a function without disrupting values assigned to variables with the same name outside the procedure or function. Generally speaking, in order for a variable to become local on the QL it must be declared thus by means of the LOCAL command.

In the following listing of "hex_bas" all variables declared in line 160 are local. In addition, even the variable "decimal%" is local. In fact, there are no global variables at all in the listing. You can have the procedure in the listing in memory with any program, as long as line numbers are not the same as your program's existing line numbers (use renum). Even if you declare the same variable names in your program, but outside the procedure, the procedure can still be called without corrupting values assigned to them.

In order to call this procedure just type "hex 255" or use it in a program:

```
10 INPUT n%
20 hex n%
```

If you want, you can make "hh\$" global in the listing, all you would have to do is remove it from line 160. From that point on it would contain the characters assigned by the procedure no matter where it is utilized, but as it stands it is only printed in window #0. For example, try calling the procedure and then type PRINT hh\$. If "hh\$" has not been declared outside the procedure you will see an asterisk "*" indicating an undeclared variable name. The same applies for the rest of the variables.

```
100 REMark hex_bas, Marshall Stiles, 1987
110 REMark Example: hex n
120 REMark Purpose: Display decimal n
130 REMark (integer 0 - 255) in hex.
140 :
150 DEFine PROCEDURE hex(decimal%)
160 LOCAL h1%, h2%, h1$, h2$, hh$
170 LET h1% = INT(decimal% / 16)
180 IF h1% < 0 THEN h1% = 0
190 LET h2% = INT(decimal% - (h1% * 16))
200 IF h2% < 0 THEN h2% = 0
210 IF h1% >= 10
220 LET h1$ = CHR$(h1% - 10 + 65)
230 ELSE
240 LET h1$ = h1%
250 END IF
260 IF h2% >= 10
270 LET h2$ = CHR$(h2% - 10 + 65)
```

```
280 ELSE
290 LET h2$ = h2%
300 END IF
310 LET hh$ = h1$ & h2$
320 PRINT #0, hh$
330 END DEFine hex
//
```

THE SCHON REPLACEMENT KEYBOARD

A Review
BY CHUCK PLATT

The SCHON replacement keyboard is supplied in two parts, the keyboard-circuit board, and a new case top that fits directly onto a standard QL base. A one page set of instructions is provided that are very clear and easy to follow, and it should not take more than 10 minutes to complete the exchange of the old for the new. It only requires a screwdriver.

The keyboard itself has the same 65 key layout as the standard QL keyboard, plus one, for a total of 66. The keys are in a three color format with the Alpha keys in grey, Numeric and control keys in black, and the function keys in red. The actual keyboard pcb fits in the modified case top provided, which is a standard QL case top with the original key matrix removed leaving a rectangular hole for the new keyboard. The key tops are very similar in look and feel to an electric typewriter's, and about the same general size. The height of the keys is only slightly higher than the standard QL's keys and does not detract from the general design of the QL. The quality of the key tops is the same as any PC key top.

In actual use the keys when pressed don't leave you with that "did I really hit that key or not" feeling that a standard QL keyboard gives you. I enjoy typing much more now than before, mostly because of the increase in speed and accuracy. It does eliminate most of the extra characters you normally get while typing because you are much less likely to hit more than one key at a time. The keys have a very positive and smooth full travel, and they have a nice "click" when they are released. The characters imbedded in the key tops are slightly larger than the standard, but the copyright () character is not included on the esc key, (I don't understand either!).

BE AWARE... This keyboard has a membrane switch mechanism similar to that of a standard QLS, so there is a probability of it wearing out. It seems to be a sturdy design and should not be a problem for a long time, if ever.

On the negative side there are just three criticisms I can make against it.

First, although the keyboard is very simple to install I found it necessary to modify the circuit board slightly to get it to rest properly inside the QL. Being that it was designed for the BRITISH QL

this is understandable. The area around the D9 connectors is different on the US QL, as well as the RF modulator, since the connectors are not the same. The plate that the D9 sockets are mounted to protrudes into the case more than the British version, and the ground cable that is soldered from the modulator case to the serial ground gets in the way. A little filing took care of those problems.

Second, For some reason the ENTER key is not a full size key as it is on the Standard QL. The top part of the key was lopped off and made into another separate key. It has no function and is not used as an extra enter key. It just sort of fills the gap that would be there otherwise. This is minor because it can be gotten used to, but there is no good reason I can think of for making the ENTER key any smaller. Maybe SCHON can be talked into making a replacement key top for the ENTER key.

Third, and most important, at \$89.95 it is MUCH TOO EXPENSIVE!!! Unfortunately because of importing costs, and the dollar/pound exchange rates at this time, there is not much chance of it getting cheaper in the near future.

One other smaller modification I decided to do was to remove the key tops and lubricate the moving part of the keys. This is a personal thing and is not required.

On the whole I heartily recommend the SCHON replacement keyboard for those want a more professional and responsive keyboard, and can afford it, without changing the overall look and size of the QL.

**** (Four stars out of five!)

We are now stocking the above-mentioned keyboard for any of you interested in the product.

We also have received a new book on ARCHIVE which is called ARCHIVE MASTER. Written by M. Vincent Lyon and published by Executive Workshop, the book retails for \$44.95. The book is over 200 pages in length and consists of 13 chapters. These chapters include: Database Management Overview, Archive Command Review/Examples, Archive Function Review/Examples, Creating The Perfect File, New File-New Fields, Screen Edit In Detail, Exporting Explored, Magic File Repair, Executive Inventory Explored, Executive Accounts Explored, Executive Customer/Supplier File Explored, Executive Expenditure Posting Explored, and Applications/Turning a Profit.

Due to the fact that unfortunately the Blueprint series book ARCHIVE by Ian Murray is now out of print, this is probably one of the better books available, even if it is higher priced than most.

In other news, we have now received two letters from Sir Clive apologising for the delay in the shipping of the Z88 we have on order through his new company, Cambridge Computer Ltd. The last letter we received was dated May 12th, postmarked May 26th received June 4th, and promised that our unit would be dispatched by June 9th. The delay

has once again been caused by the software. If it is actually shipped on schedule we should be able to give a partial review in the July issue.

We have been using QRAM in conjunction with our Point of Sale and like it a lot. One advantage of the program, when using it with ARCHIVE is that you do not have to exit ARCHIVE to make a backup of a database file on an existing storage medium, either microdrive or disk. As most of you know, if you try to backup your current dbf file to a medium that has an older version of the same file already on it, you will get an "already exists" error. Then, you would have to quit ARCHIVE, and either use I.C.E. or TOOLKIT II or SuperBasic to copy the current version to the backup medium.

With QRAM from within ARCHIVE you merely have to hit the ALT and the "/" key to access QRAM and then select the appropriate destination device and then the "copy" and "over" boxes and the file(s) will automatically be overwritten. QRAM also shows you on its screen at all times the date and filesize of all files so it is very easy to see when the last update was. QRAM does require extra memory on your QL but is an excellent piece of software. Price: \$49.95 .

The following is a letter we received from Mel Mac Karon of Albuquerque. He writes:

"Enclosed is the Sound Experimentation program I mentioned to you.. The listing is rather long but I think it's still a nifty piece of programming for experimentation with the QL's sound capabilities (such as they are).

You may...refer clients to me for copying it.<cost is \$5.00> I would want to charge for it..(plus have the sender supply his own micro-cartridge) to help me defray costs. I'll pay postage. (I am also willing to transfer it via modem at the caller's cost)."

Mel Mac Karon
PO Box 14466
Albuquerque, NM 87191-0466

We have a reader who is using a Volks 12 modem and is having difficulty. One thing he would like to be able to do is to have a clock running on the screen which is able to show 1000th's of a second. If anyone knows how to do this please drop us a line and we will forward it.

We also have a reader who needs instructions on how to print from within Metacomco's PASCAL program. He is experiencing difficulty. You may write to QLR with any suggestions.

Mr. R. Gilbert of Nova Scotia wrote to us about some information needed for anyone who has a Smith Corona printer:

"...it needs to be 'set up' by printing anything from QLSS or QLWP, and after that it will print from QLBB after the change described in the January issue <of QLR> for Gemini. I have set up QLSS and QLWP cartridges to give normal, bold, proportional spaced, or condensed point and can pass on the 'recipe' to anyone else interested."

R. Gilbert
20 Sunset Drive
Dartmouth,
N.S.
CANADA B2X 2R8

We have a reader who informed us the Tandy CM11 Hi-Res RGB color monitor can work with your QL. The resolution on this monitor is 640 by 225 with a .4 dot pitch. If you put a 74s chip on the cable on the horizontal lead it is supposed to work perfectly.

We have some additional information on Futura. The hardware, as we have said before, is more or less finished. Tony Tebby is finishing up the software but this is expected to take another month or so. The machine will probably not now be ready to ship until late August.

That's the bad news. The good news is we are starting to hear more about what the machine will have standard, as an option, etc. and it is getting more and more impressive with each phone call-- even if it is now only vaporware. QUILL supposedly runs three times faster than on a QL. Editing functions from within QUILL such as scrolling from one paragraph to another, etc. are much much faster than on a standard QL.

There will be an external 8 bit user port. Because Futura will be utilizing SIP memory, a full 1 mb will be available on the 1st card. The machine will have an Atari ST compatible video mode as well as being QL video compatible, on all models. The ST emulator will be an option which will plug into the internal ROM port which will contain even slots. CP/M emulation, however, will be standard on all models of Futura. To accommodate the ST video mode, an analog RGB video input will be included along with the TTL video for QL compatibility.

The keyboard will be Sandy's own design. It will have 10 function keys and a full numeric keypad. Unlike Thor, in which the cursor keys are on the numeric pad and inhibit the full use of the pad unless you remember to turn the "Num Lock" on, the cursor keys on Futura will be separate and in the same position as on the QL keyboard. On Thor, the cable to the keyboard plugs in behind the Thor box. On Futura, it will plug in from the front of the box which should enable you to have more distance between the keyboard and the box if you so desire. The mouse port will also be on the front of the box rather than on the rear. The joystick port will be on the keyboard..

In next month's issue we hope to have more information on Futura and a listing of more formats you can use for CP/M.

Until next month, enjoy your QL.